

Remarks

Applicants respectfully request reconsideration of the present application in view of the above amendments and following remarks. Claims 14-17 have been added. No claims have been amended or cancelled. Therefore, claims 1-17 are pending in the present application.

Claims 1-3 and 11-13 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2004/0053099 to Franklin et al. ("the Franklin reference"). Applicants respectfully traverse this rejection.

Independent claim 1 is directed to a method for forming a fuel cell assembly. The method comprises the steps of: a) forming a plurality of fuel cell sub-assembly modules, each containing a plurality of bonded together fuel cell units; and b) joining together the plurality of sub-assembly modules to form the fuel cell assembly.

In rejecting claim 1, the Examiner made reference to paragraph 4 and claim 3 of the Franklin reference. These portions of the Franklin reference, specifically paragraph 4, describe the individual fuel cells as modular units which integrate a bipolar separator plate (BSP), a membrane electrode assembly (MEA), and reactant and coolant manifolds. See *Franklin*, ¶ 0004, claim 3. The Franklin reference further states that the individual components are assembled into integrated modules and these modules are tested individually for full functionality before being assembled into a fuel cell stack. See *id.* In light of the remarks set forth in the Office Action, it appears that the Examiner has interpreted the term "integrated modules" as being fuel cell sub-assembly modules, each containing a plurality of fuel cells.

Applicants submit that the Examiner's interpretation of "integrated modules" is incorrect.

The term "integrated module" used in the Franklin reference is describing an individual fuel cell, not a sub-assembly module containing a plurality of bonded together fuel cells. In paragraph 4 of the Franklin reference, the individual fuel cells are described as "modular units which have integrated the bipolar separator plate (BSP), the membrane electrode assembly (MEA), and the reactant and coolant manifolds." *Franklin*, ¶ 4 (emphasis added). Since the terms "modular units" and "integrated" are used to describe the individual fuel cells, describing each of the individual fuel cells as an integrated module is consistent with the description in the Franklin reference. Further, Applicants submit that the "individual components" described as being assembled into the integrated modules (i.e., individual fuel cells) in paragraph 4 are the bipolar separator plate, the membrane electrode assembly, and the reactant and coolant manifolds, not each of the individual fuel cells.

As a result of the interpretation of the portion of the Franklin reference set forth above, the Franklin reference teaches nothing more than stacking the individual fuel cells (i.e., integrated modules) on top of each other to form a fuel cell stack. The Franklin reference does not teach or suggest forming a plurality of fuel cell sub-assembly modules, each containing a plurality of bonded together fuel cell units, and joining together the plurality of sub-assembly modules to form a fuel cell assembly as recited in claim 1.

Since the Franklin reference fails to teach all of the limitations included in claim 1, Applicants request that the rejection of claim 1 be withdrawn. As claims 2

and 3 depend from claim 1, Applicants request that the rejection of claims 2 and 3 be withdrawn for at least the same reason that was set forth with respect to claim 1.

Independent claim 11 is directed to a fuel cell assembly including a plurality of fuel cell sub-assembly modules. For at least the same reason set forth with respect to claim 1, the Franklin reference does not teach or suggest a fuel cell assembly including a plurality of fuel cell sub-assembly modules as recited in claim 11. Applicants request that the rejection of claim 11 be withdrawn. As claims 12 and 13 depend from claim 11, Applicants request that the rejection of claims 12 and 13 be withdrawn for at least the same reason that was set forth with respect to claim 11.

Claims 4-10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Franklin reference in view of U.S. Publication No. 2004/0053100 to Stanley et al. ("the Stanley reference"), or U.S. Publication No. 2005/0091838 to Frank et al. ("the Frank reference"), or U.S. Patent No. 6,761,991 to Frisch et al. ("the Frisch reference").

As stated above with respect to claim 1, the Franklin reference does not teach or suggest a method of forming a fuel cell assembly including the step of forming a plurality of fuel cell sub-assembly modules, each containing a plurality of bonded together fuel cell units. The Stanley, Frank and Frisch references also fail to teach or suggest the limitation that was lacking in the Franklin reference. In particular, the Stanley reference discloses a flow field layer that may be deposited on a membrane electrode assembly by applying a curable epoxy to the membrane and allowing the epoxy to cure in a three dimensional pattern. See *Stanley*, ¶ 0037. The Frank

reference states that a pre-formed gasket or a seal material may be used to connect two bipolar plates. See *Frank*, ¶ 0092. The Frisch reference states that liquid sealing elements may be used in the construction of fuel cell plates and other elements of the fuel cell stacks. See *Frisch*, Col. 6, lines 30-35. However, the Stanley, Frank and Frisch references do not teach or suggest forming a plurality of fuel cell sub-assembly modules, each containing a plurality of bonded together fuel cell units as set forth in claim 1. Since claims 4-10 depend from claim 1, Applicants request that the rejection of claims 4-10 be withdrawn. Applicants also request that the rejection of claims 12 and 13 be withdrawn for similar reasons in light of their dependency on independent claim 11, which includes a similar limitation as set forth in claim 1.

Dependant claim 4 depends from claim 1 and sets forth further steps for forming each of the sub-assembly modules. Since none of the references of record teach or suggest forming subassembly modules before forming the fuel cell assembly, Applicants submit that the references of record also do not teach the additional steps set forth in claim 4 that relate to the formation of each sub-assembly module. For this additional reason, Applicants request that the rejection of claim 4 be withdrawn.

New independent claim 14 is directed to a fuel cell assembly comprising a plurality of fuel cells coupled together to form a plurality of fuel cell sub-assembly modules. The plurality of fuel cell sub-assembly modules are coupled together to form the fuel cell assembly. New dependent claims 15-17 further define the

invention set forth in claim 14. Applicants submit that new claims 14-17 are allowable over the references of record.

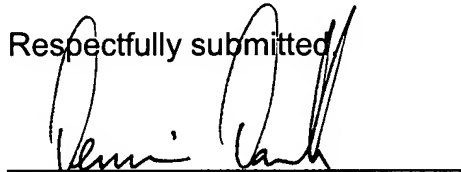
Conclusion

In light of the foregoing, Applicants submit that claims 1-17 are in condition for allowance and such allowance is respectfully requested. Should the Examiner feel that any unresolved issues remain in this case, the undersigned may be contacted at the telephone number listed below to arrange for an issue resolving conference.

Applicants do not believe that any fee is due at this time. However, the Commissioner is hereby authorized to charge any fee that may have been overlooked to Deposit Account No. 10-0223.

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Respectfully submitted



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